03050103-040

(Cane Creek)

General Description

Watershed 03050103-040 (formerly 03050103-042) is located in Lancaster County and consists primarily of ***Cane Creek*** and its tributaries. The watershed occupies 90,107 acres of the Piedmont region of South Carolina. The predominant soil types consist of an association of the Helena-Herdon-Georgeville-Appling series. The erodibility of the soil (K) averages 0.24; the slope of the terrain averages 12%, with a range of 2-45%. Land use/land cover in the watershed includes: 65.8% forested land, 19.0% agricultural land, 9.3% urban land, 4.4% scrub/shrub land, 0.9% water, and 0.6 barren land.

Cane Creek originates in North Carolina and accepts drainage from Simpson Branch, Unity Branch, Flag Pond Branch, McAteer Branch, Sandy Branch, Cedar Pines Lake, and Camp Creek (North Prong, South Prong). Further downstream, the Bear Creek drainage enters Cane Creek. Bear Creek accepts drainage from Caney Branch and Dry Branch before flowing through the Lancaster Reservoir. Lancaster Reservoir (75 acres) is used for municipal and recreational purposes for the Town of Lancaster. Turkey Quarter Creek (Little Turkey Creek) flows into Bear Creek at the reservoir, and further downstream Gills Creek (Hannahs Creek) enters near the Town of Lancaster. Rum Creek drains into Cane Creek near the Town of Fort Lawn. There are numerous small lakes and ponds (totaling 371.4 acres) for flood control purposes and a total of 233.5 stream miles in this watershed, all classified FW.

Water Quality

Station #	Type	Class	Description
CW-185	S	FW	CANE CREEK AT SC 200 5 MI NNE OF LANCASTER
CW-210	BIO	FW	CANE CREEK AT SC 9
CW-151	S	FW	BEAR CREEK AT S-29-362 3.5 MI SE OF LANCASTER
CW-047	S	FW	GILLS CREEK AT US 521 NNW OF LANCASTER
CW-131	S	FW	BEAR CREEK AT S-29-292 1.6 MI W OF LANCASTER
CW-017	S	FW	CANE CREEK AT S-29-50
CW-232	W	FW	RUM CREEK AT S-29-187

Cane Creek - There are three monitoring sites along Cane Creek. At the furthest upstream site ***(CW-185)***, aquatic life uses are partially supported due to dissolved oxygen excursions. This is a secondary monitoring station and sampling is intentionally biased towards periods with potentially low dissolved oxygen concentrations. A significant decreasing trend in five-day biochemical oxygen demand suggests improving conditions for this parameter. Recreational uses are partially supported due to fecal coliform bacteria excursions.

At the next site downstream ***(CW-210)***, aquatic life uses are partially supported based on macroinvertebrate community data. Aquatic life uses are not supported at the furthest downstream site ***(CW-017)*** due to dissolved oxygen excursions. This is another secondary monitoring station and sampling is intentionally biased towards periods with potentially low dissolved oxygen concentrations. Recreational uses are not supported due to fecal coliform bacteria excursions.

Bear Creek - There are two monitoring sites along Bear Creek. Upstream of Gills Creek ***(CW-151)***, aquatic life uses are not supported due to dissolved oxygen excursions. There is a significant increasing trend in pH. This is a secondary monitoring station and sampling is intentionally biased towards periods with potentially low dissolved oxygen concentrations. Significant decreasing trends in five-day biochemical oxygen demand and turbidity suggest improving conditions for these parameters. Recreational uses are not supported due to fecal coliform bacteria excursions.

Downstream of Gills Creek ***(CW-131)***, aquatic life uses are partially supported due to dissolved oxygen excursions. This is also a secondary monitoring station and sampling is intentionally biased towards periods with potentially low dissolved oxygen concentrations. A significant increasing trend in dissolved oxygen concentration and a significant decreasing trend in five-day biochemical oxygen demand suggest improving conditions for these parameters. Recreational uses are not supported due to fecal coliform bacteria excursions, compounded by a significant increasing trend in fecal coliform bacteria concentrations.

Gills Creek (CW-047) - Aquatic life uses are not supported due to dissolved oxygen excursions. There is a significant increasing trend in pH. This is a secondary monitoring station and sampling is intentionally biased towards periods with potentially low dissolved oxygen concentrations. Recreational uses are not supported due to fecal coliform bacteria excursions.

Rum Creek (CW-232) - Aquatic life uses are not supported due to dissolved oxygen excursions. Recreational uses are partially supported due to fecal coliform bacteria excursions.

NPDES Program

Active NPDES Facilities

RECEIVING STREAM ***FACILITY NAME*** ***PERMITTED FLOW @ PIPE (MGD)*** ***COMMENT***	***NPDES#*** ***TYPE*** ***LIMITATION***
BEAR CREEK SPRINGS IND./LANCASTER PLT PIPE #: 001 FLOW: 0.01	SCG250136 MINOR INDUSTRIAL EFFLUENT
CANE CREEK MCATEER TRAILER PARK PIPE #: 001 FLOW: .00565 WQL FOR NH3-N, TRC, DO	SC0027383 MINOR DOMESTIC WATER QUALITY

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

SOLID WASTE LANDFILL NAME	***PERMIT #***

FACILITY TYPE	*STATUS*
FRANKS TIRE PROCESSING TIRE PROCESSING	292414-5201 --------
SNIPES SHORT-TERM C&D LANDFILL CONSTRUCTION	292648-1301 --------
SPRINGS INDUSTRIES INDUSTRIAL/CONSTRUCTION	293314-1201 (CWP-023, IWP-080 ------- IWP-081, IWP-134, IWP-102)
PARNELL INERT LANDFILL INDUSTRIAL	IWP-213 -------

Growth Potential

The City of Lancaster is located in this watershed, and has densely developed areas of residential, commercial, and industrial land uses. The City of Lancaster has expanded its wastewater treatment plant and relocated the outfall to the Catawba River. This will allow for increased industrial and municipal flows. A large area of residential development extends into the countryside to the south of the city, and also along S.C. Hwy. 9 and S.C. Hwy. 903 to the east and U.S. Hwy. 521 and S.C. Hwy. 200 to the north. Significant industrial and commercial growth is occurring on the north side of the city along the S.C. Hwy. 9 Bypass. Rail lines to the Cities of Rock Hill and Chester run along S.C. Hwy. 9. Water service is available along major roads throughout the watershed. Sewer service is available in the City of Lancaster, in the residential areas to its south,and along S.C. Hwy. 903 east of the city.

Crescent Resources, the real estate arm of Duke Energy, plans to develop a large mixed-use community along Fishing Creek Reservoir, and would affect a portion of this watershed. The development would extend from S.C. Hwy. 9 down to S.C. Hwy. 200, within Lancaster County. The intention of the development company is to create “Catawba Ridge”, a 16,000 home, densely populated residential area, that would include commercial and industrial uses.

Watershed Protection and Restoration

Special Projects

NPS Assessment and TMDL for Phosphorus in the Catawba River Basin

SCDHEC has contracted with the University of South Carolina to quantify relationships between land use and water quality in the Catawba River Basin. The project will evaluate these relationships using the WARMF model, which will be used to develop a TMDL for total phosphorus in Fishing Creek Reservoir, Cedar Creek Reservoir, and Lake Wateree. The TMDL is being developed in cooperation with the North Carolina Division of Water Quality and will involve stakeholders in the basin. Additional information about the TMDL development process can be found in Appendix B.

Lancaster Greenway Preserve Buffer Strip Restoration

The Katawba Valley Land Trust (KVLT) will restore riparian forest buffers along the Catawba River tributaries on land owned by the KVLT. This project contributes to implementation of the Catawba River Corridor Plan and includes an educational component.